

Appl. No. 10/064,712
Amdt. dated March 02, 2006
Reply to Office action of January 20, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (currently amended): A signal compensation method comprising:

- 5 comparing a transmission signal with a reference level for generating a comparison
 result; and
 dynamically increasing or decreasing a compensating current for compensating the
 transmission signal according to the comparison result.

- 10 2 (original): The signal compensation method of claim 1 wherein the transmission signal
 is transmitted via an Ethernet transmission line.

- 3 (original): The signal compensation method of claim 1 wherein said comparing step
 comprises comparing the transmission signal and the reference level at intervals of a
15 predetermined period.

4 (cancelled).

- 5 (original): The signal compensation method of claim 1 wherein the transmission signal
20 is a differential signal.

6 (currently amended): A signal compensation circuit comprising:

- a detection circuit for detecting a signal level of a transmission signal transmitted via
 a transmission line; and
25 a correction circuit for dynamically compensating the transmission signal according to
 a comparison result generated by comparing the transmission signal with a
 reference level, the correction circuit comprising:

Appl. No. 10/064,712
Amdt. dated March 02, 2006
Reply to Office action of January 20, 2006

a first resistor; and

a plurality of unit current sources selectively turned on or off according to a

difference between the transmission signal and the reference level, the

plurality of unit current sources generating a compensation current according

5 to a result generated from the detection circuit, wherein the compensation
current passes through the first resistor to generate a compensation voltage for
compensating the signal level of the transmission signal.

7 (cancelled).

10

8 (currently amended): The signal compensation circuit of ~~claim 7~~ claim 6 wherein the correction circuit further comprises a second resistor connecting between the first resistor and the transmission line.

15 9 (original): The signal compensation circuit of claim 6 wherein the transmission signal is transmitted via the transmission line.

10 (original): The signal compensation circuit of claim 9 wherein the transmission line is an Ethernet transmission line.

20

11 (original): The signal compensation circuit of claim 6 wherein the transmission signal is an MLT-3 coded signal.

12 (original): The signal compensation circuit of claim 6 wherein the transmission signal
25 is a 100Base-T signal.

13 (original): The signal compensation circuit of claim 6 wherein the detection circuit detects a difference between the transmission signal and the reference level at

Appl. No. 10/064,712
Amdt. dated March 02, 2006
Reply to Office action of January 20, 2006

intervals of a predetermined period.

14 (original): The signal compensation circuit of claim 6 wherein the transmission signal is a differential signal.

5

15-17 (cancelled).

18 (original): The signal compensation circuit of claim 14 further comprising a common-mode power supply for providing the differential signal with a common-mode voltage.

10

19 (original): The signal compensation circuit of claim 14 wherein the signal compensation circuit compensates a baseline wander of the transmission signal.

15 20 (original): The signal compensation circuit of claim 18 wherein the common-mode voltage is 1.8 volts.

21 (new): The signal compensation method of claim 1 wherein dynamically increasing or decreasing a compensating current for compensating the transmission signal according to the comparison result comprises selectively turning on or off a plurality of unit current sources according to the comparison result for generating the compensation current.

20